Fig.1

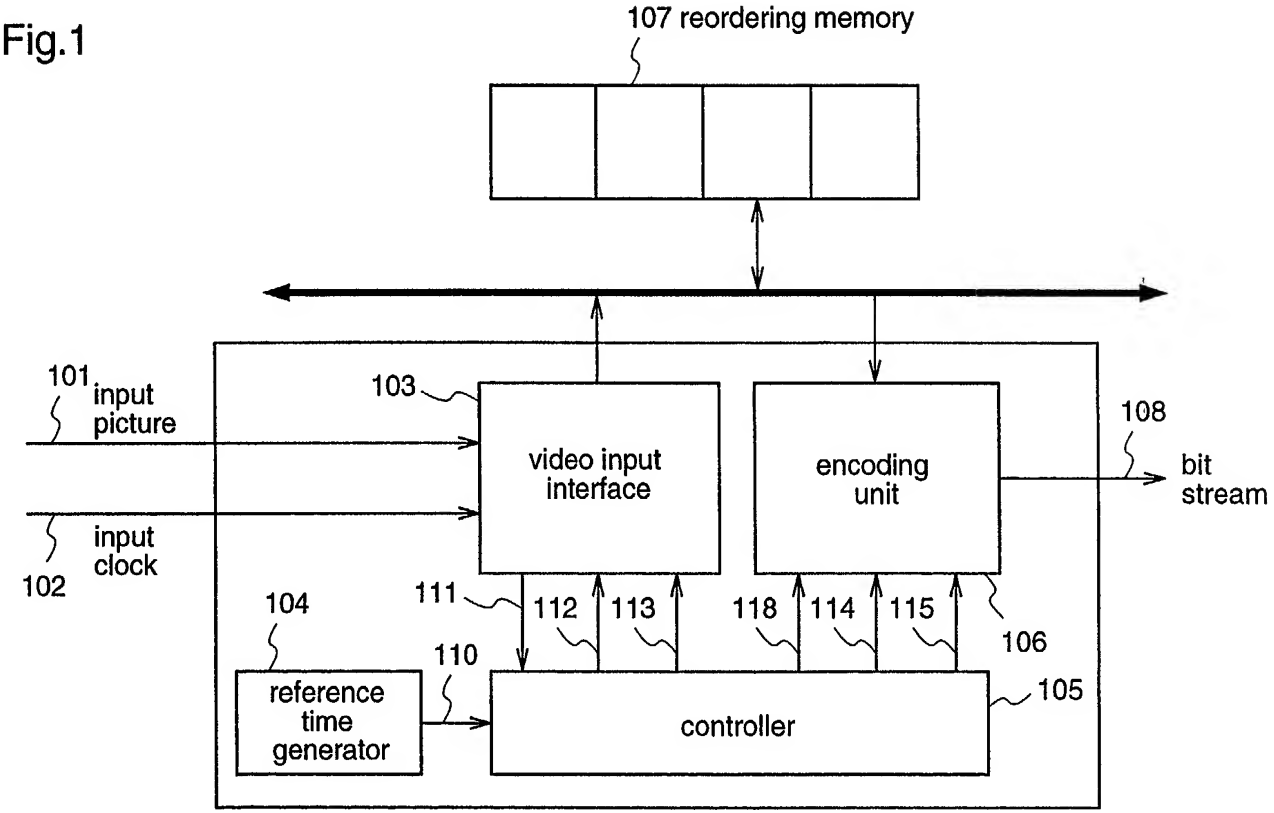

107 reordering memory
101
input
picture
102
input
clock
103
video input
interface
encoding
unit
108
bit
stream
104
reference
time
generator
110
111
112
113
118
114
115
106
105
controller

Fig.2

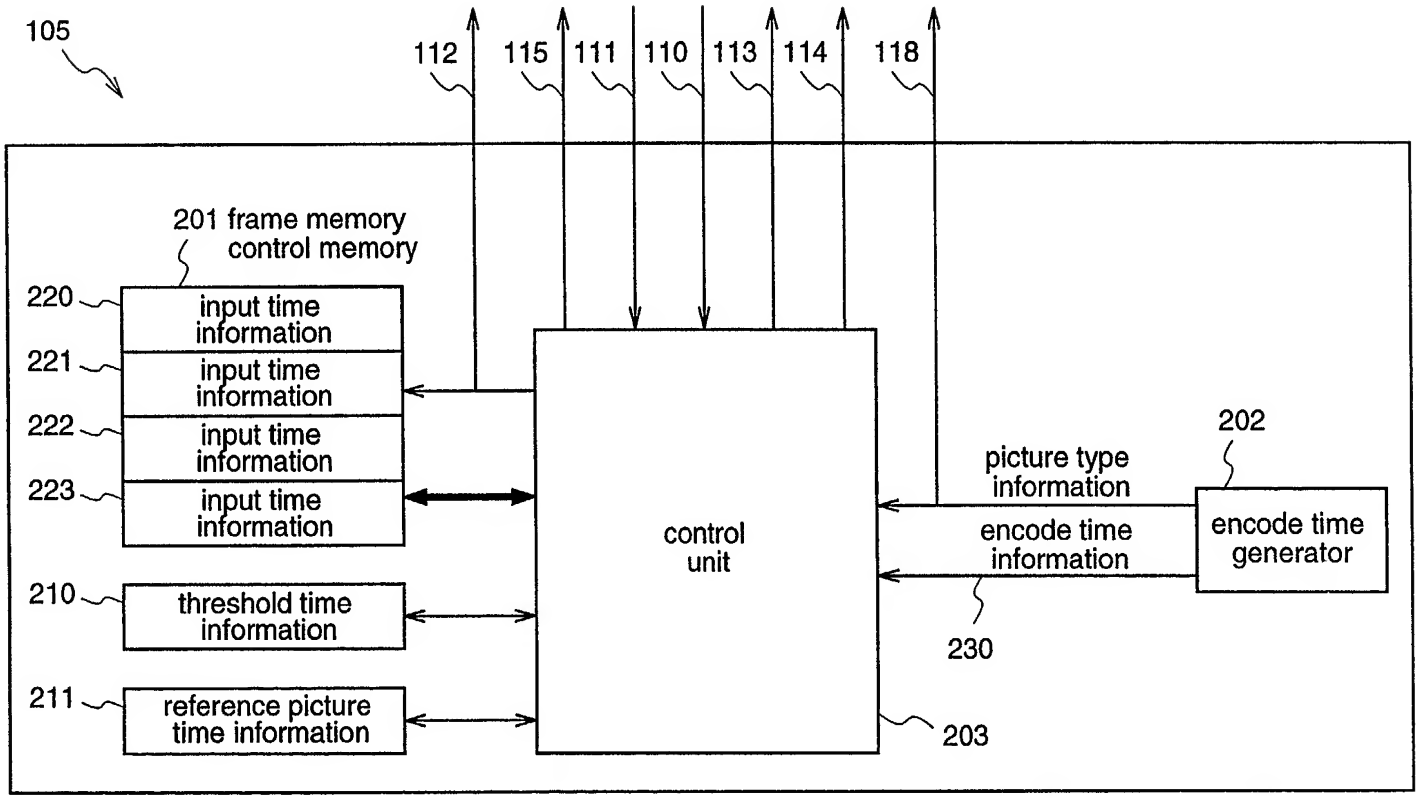

105
112
115
111
110
113
114
118
201 frame memory control memory
220
input time information
221
input time information
222
input time information
223
input time information
210
threshold time information
211
reference picture time information
control unit
202
picture type information
encode time information
encode time generator
230
203

Fig.3

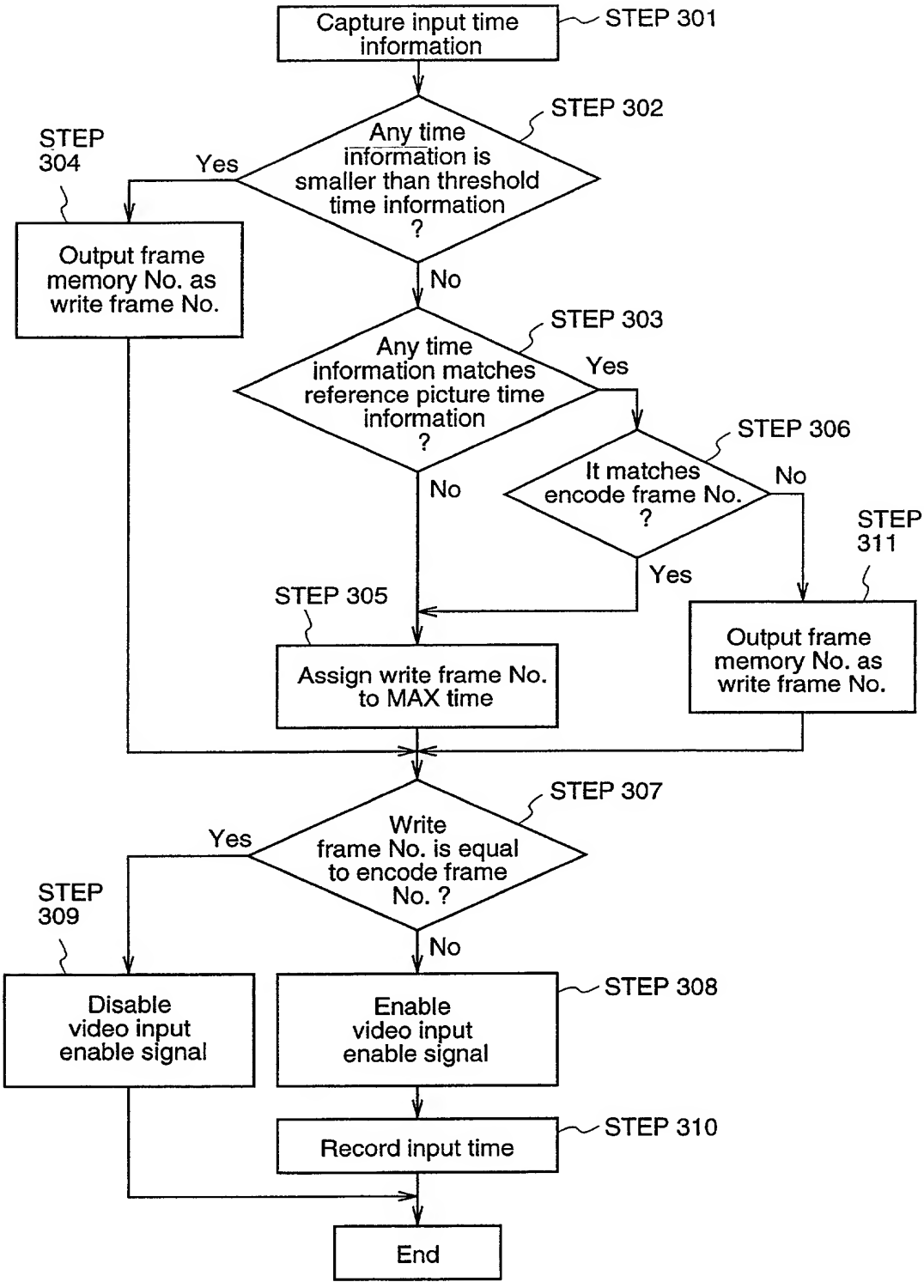

Capture input time information
STEP 301
Any time information is smaller than threshold time information ?
STEP 302
Yes
STEP 304
Output frame memory No. as write frame No.
No
Any time information matches reference picture time information ?
STEP 303
Yes
It matches encode frame No. ?
STEP 306
No
Yes
STEP 311
Output frame memory No. as write frame No.
STEP 305
Assign write frame No. to MAX time
Write frame No. is equal to encode frame No. ?
STEP 307
Yes
STEP 309
Disable video input enable signal
No
Enable video input enable signal
STEP 308
Record input time
STEP 310
End

Fig.4

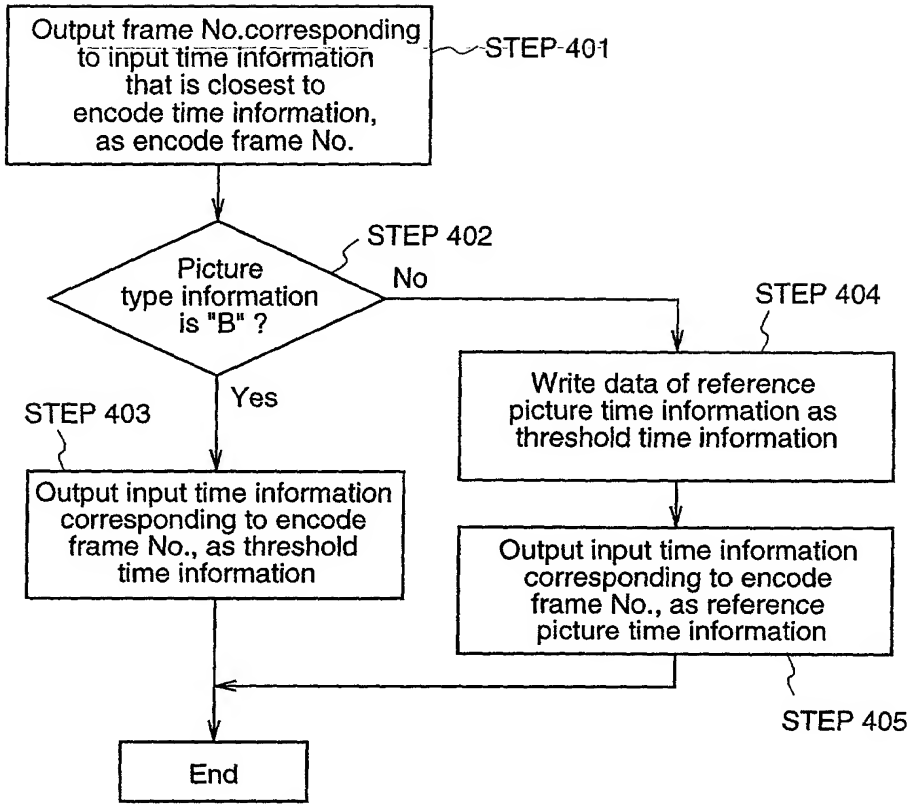

Output frame No.corresponding to input time information that is closest to encode time information, as encode frame No.
STEP 401
STEP 402
Picture type information is "B" ?
No
Yes
STEP 403
STEP 404
Write data of reference picture time information as threshold time information
Output input time information corresponding to encode frame No., as threshold time information
Output input time information corresponding to encode frame No., as reference picture time information
STEP 405
End

Fig.5

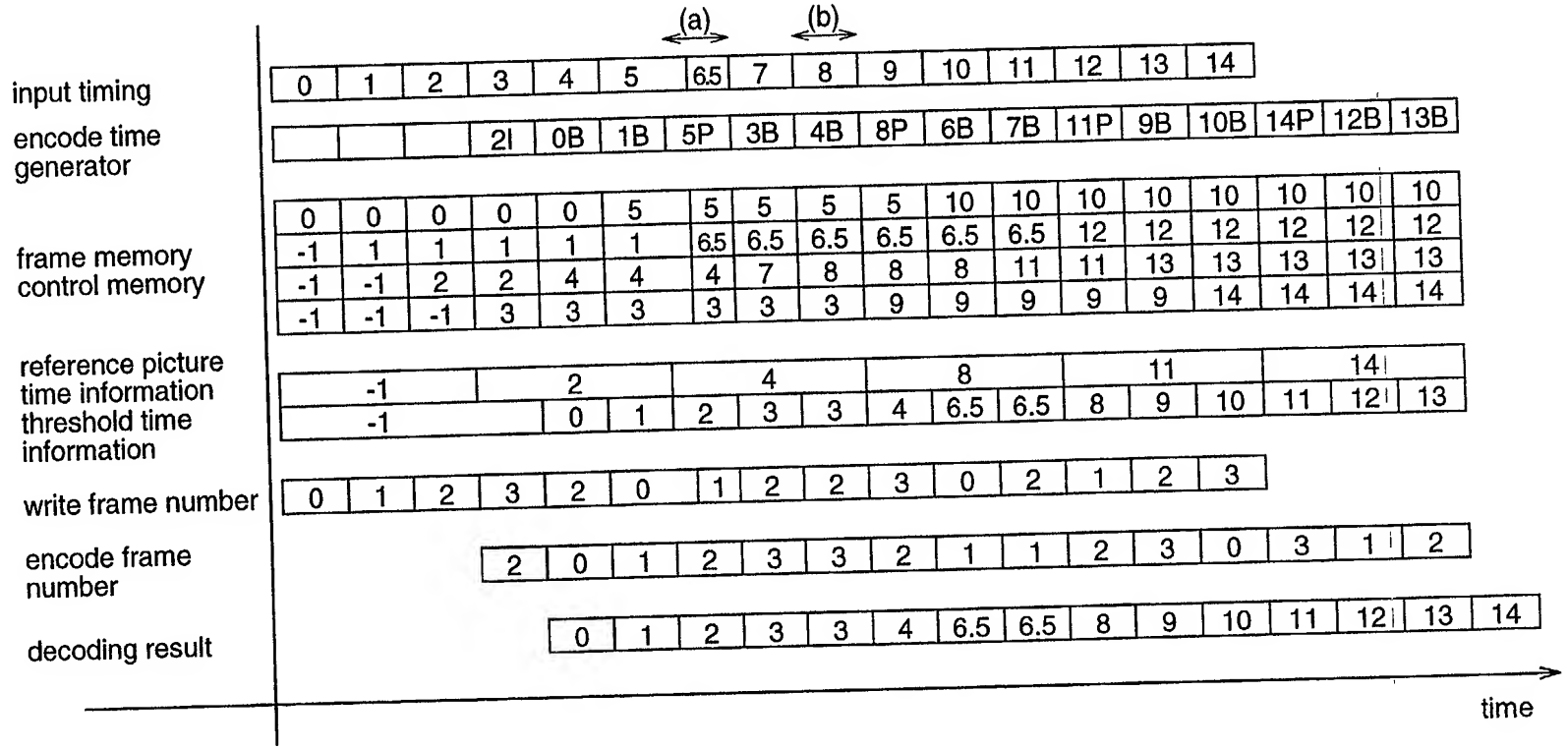

(a)
(b)
input timing
encode time generator
frame memory control memory
reference picture time information
threshold time information
write frame number
encode frame number
decoding result
time

Fig.6

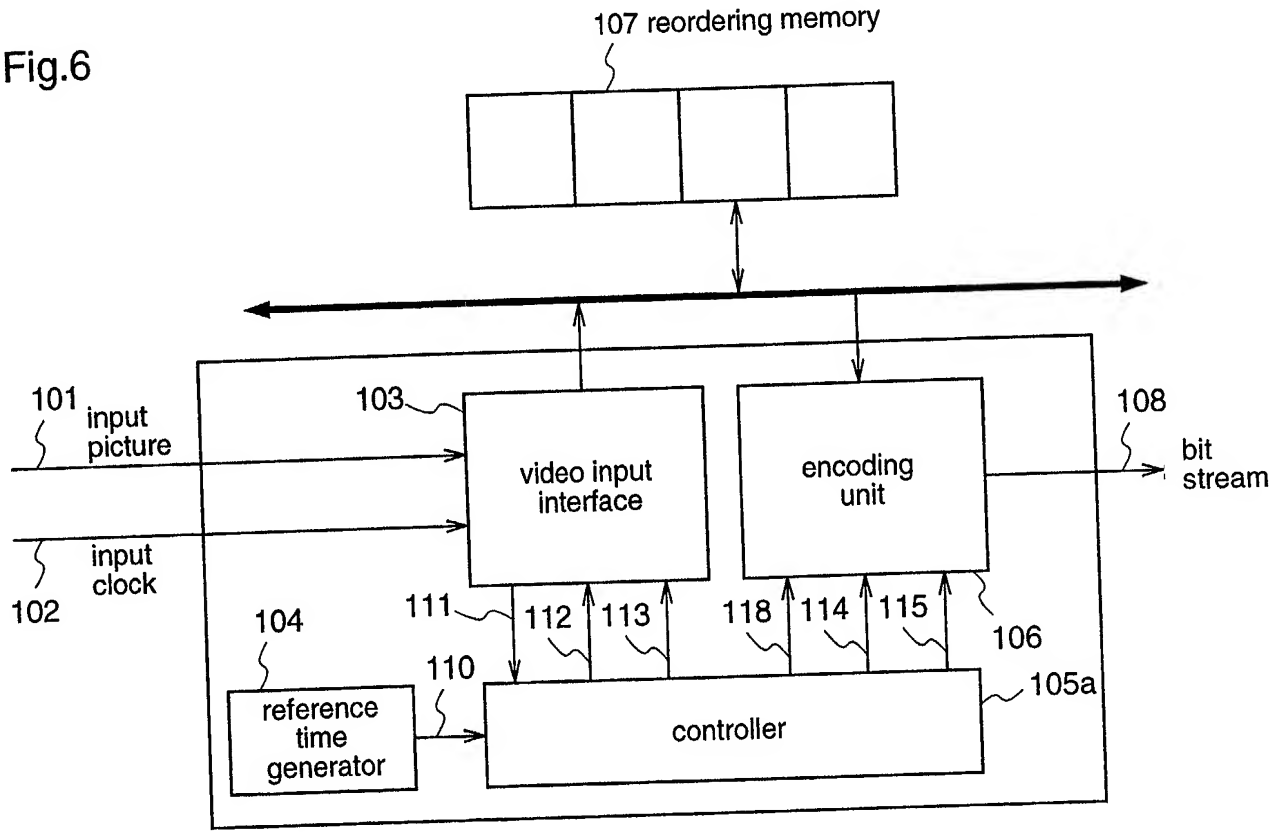

107 reordering memory
101
input
picture
102
input
clock
103
video input
interface
encoding
unit
108
bit
stream
104
reference
time
generator
110
111
112
113
118
114
115
106
105a
controller

Fig.7

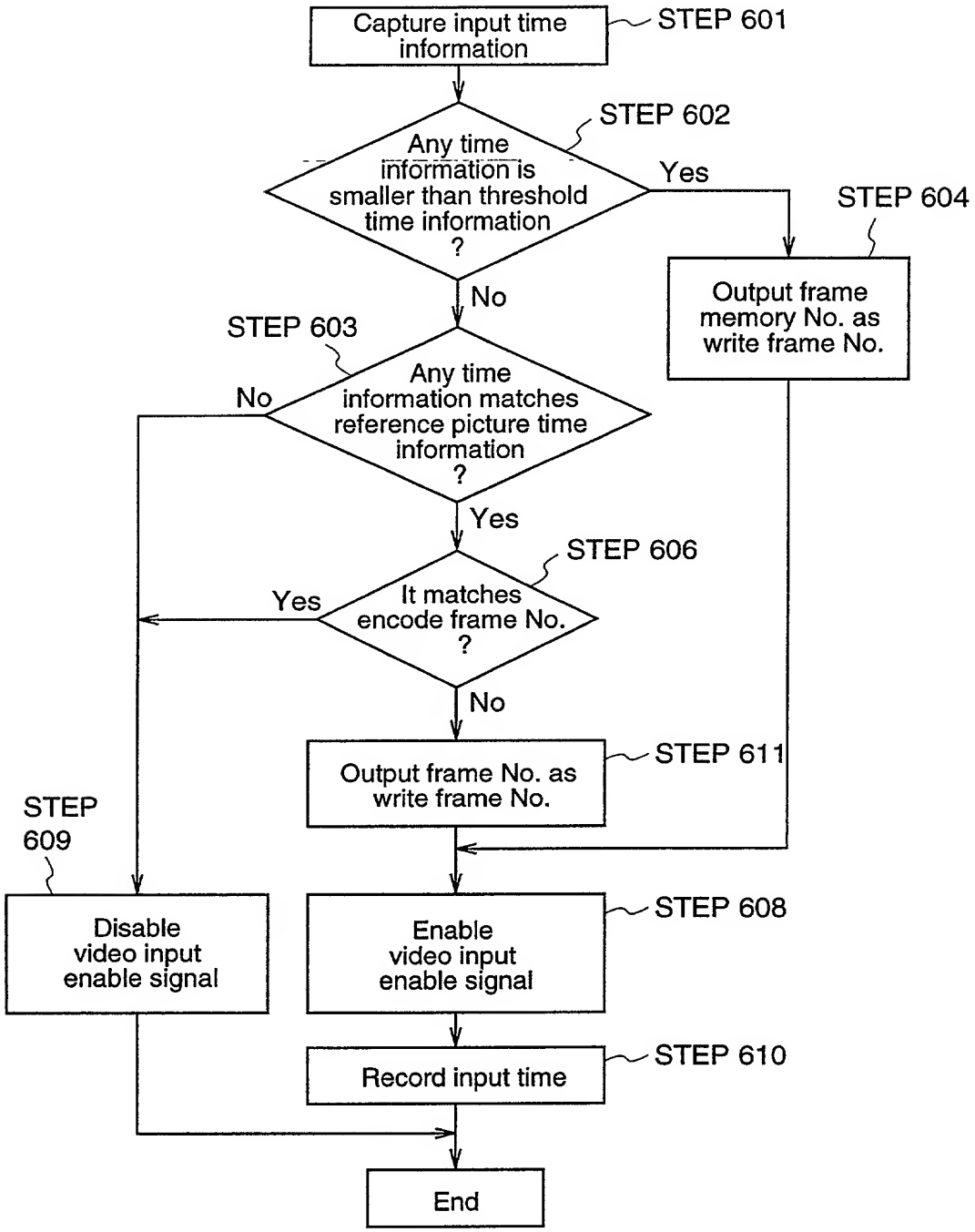

Capture input time information
STEP 601
Any time information is smaller than threshold time information ?
STEP 602
Yes
No
STEP 604
Output frame memory No. as write frame No.
STEP 603
Any time information matches reference picture time information ?
No
Yes
STEP 606
It matches encode frame No. ?
Yes
No
Output frame No. as write frame No.
STEP 611
STEP 609
Disable video input enable signal
Enable video input enable signal
STEP 608
Record input time
STEP 610
End

Fig.8

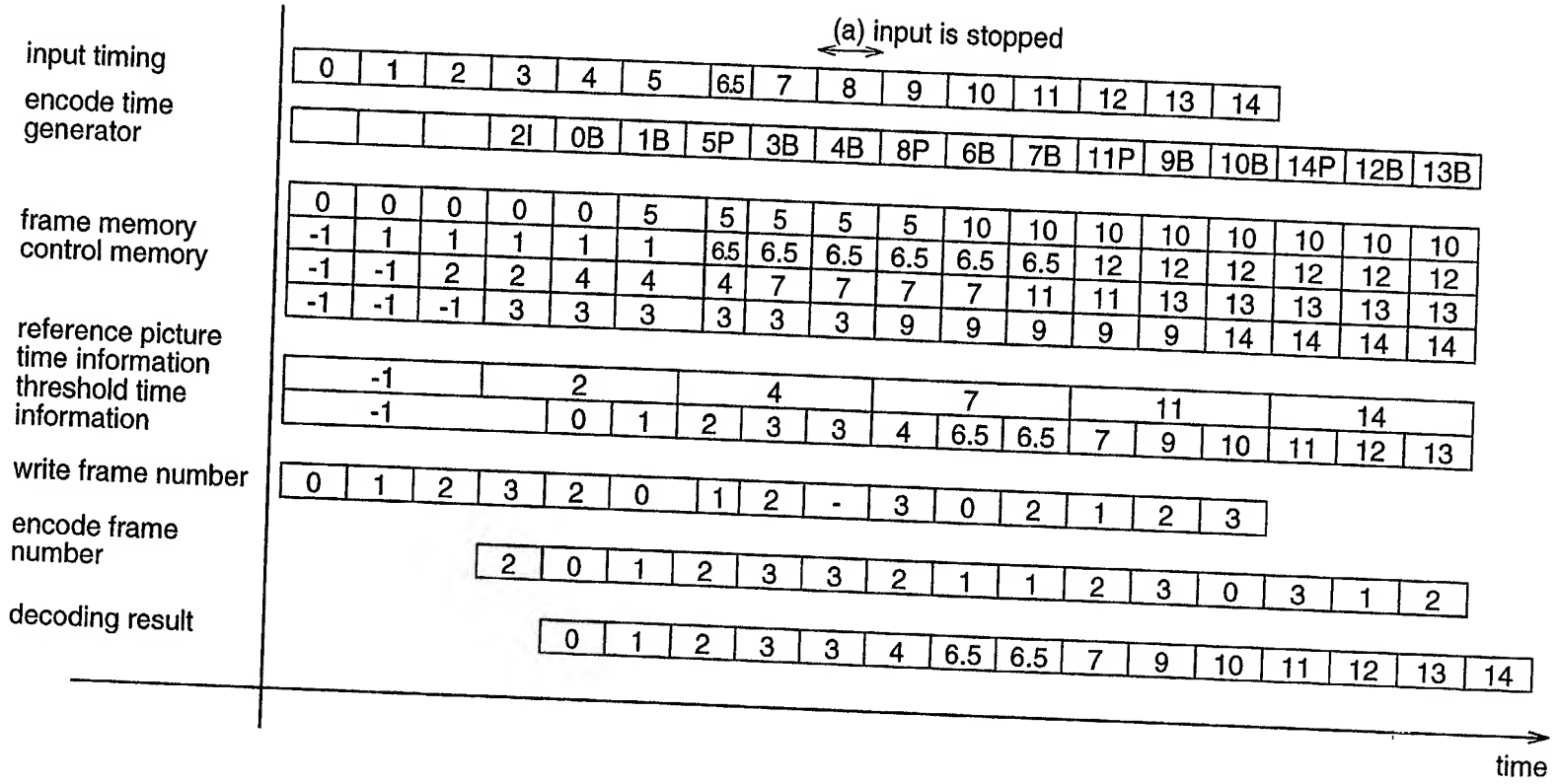

(a) input is stopped
input timing
encode time generator
frame memory control memory
reference picture time information
threshold time information
write frame number
encode frame number
decoding result
time

Fig.9

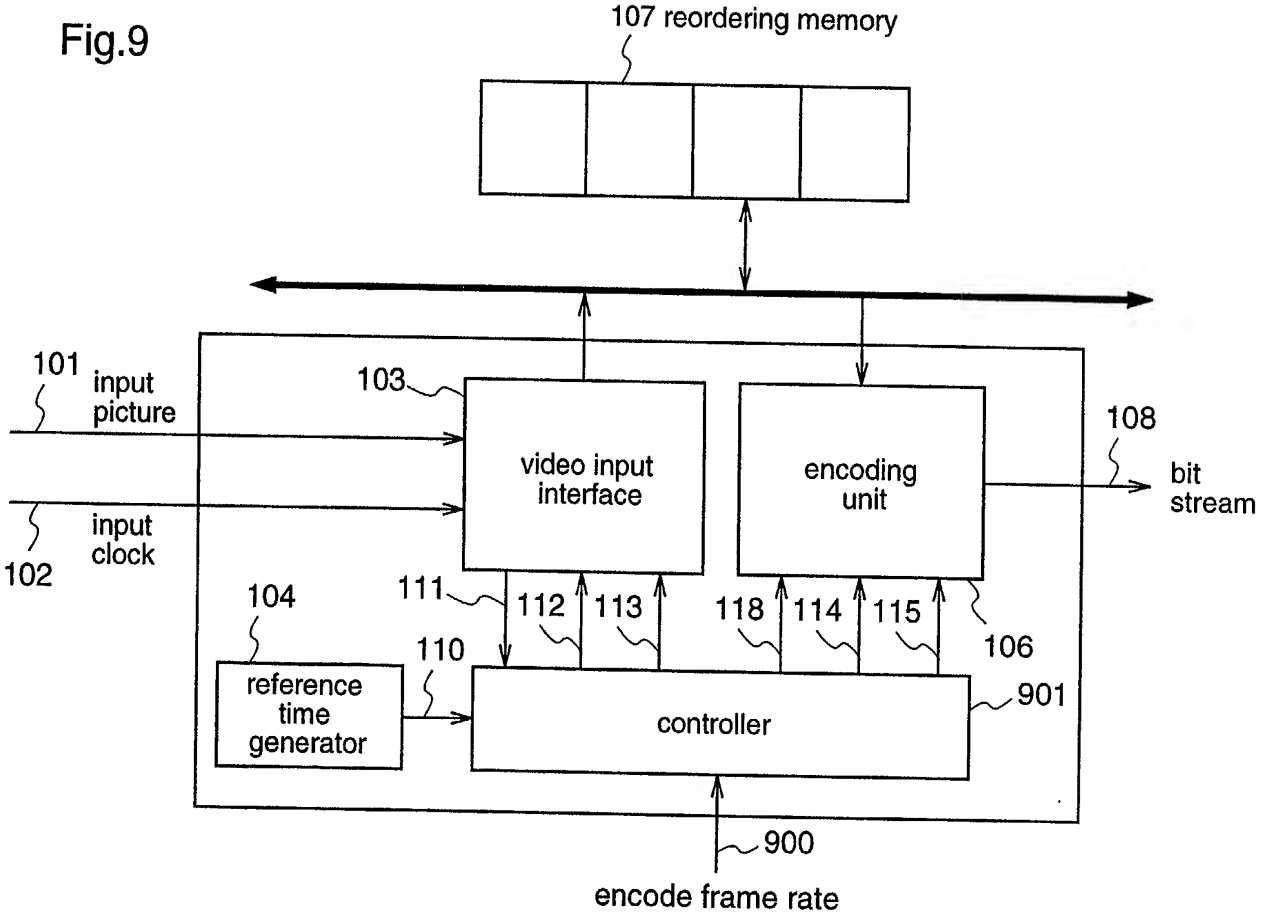

107 reordering memory
101
input
picture
102
input
clock
103
video input
interface
encoding
unit
108
bit
stream
104
reference
time
generator
110
111
112
113
118
114
115
106
controller
901
900
encode frame rate

Fig.10

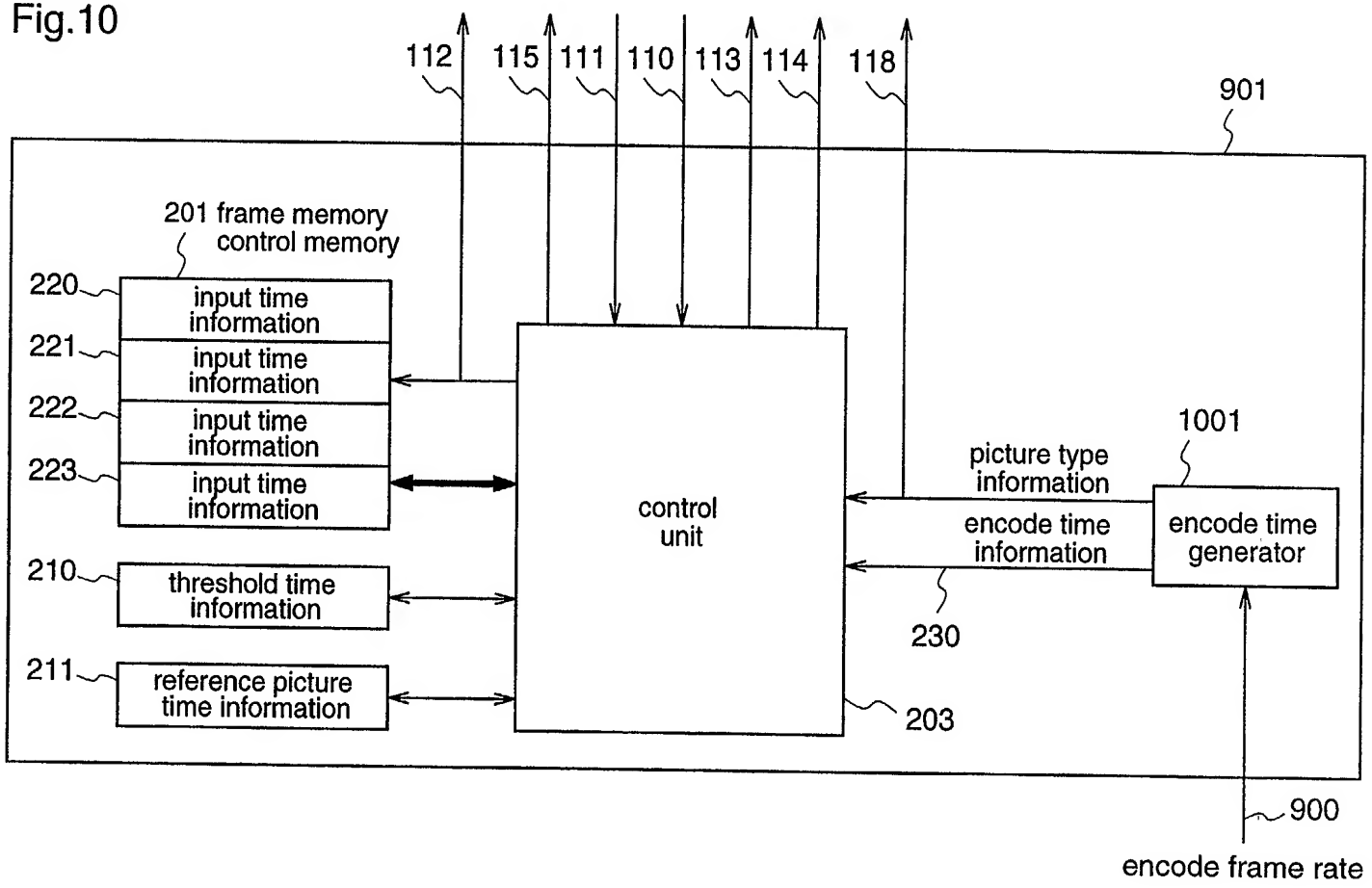
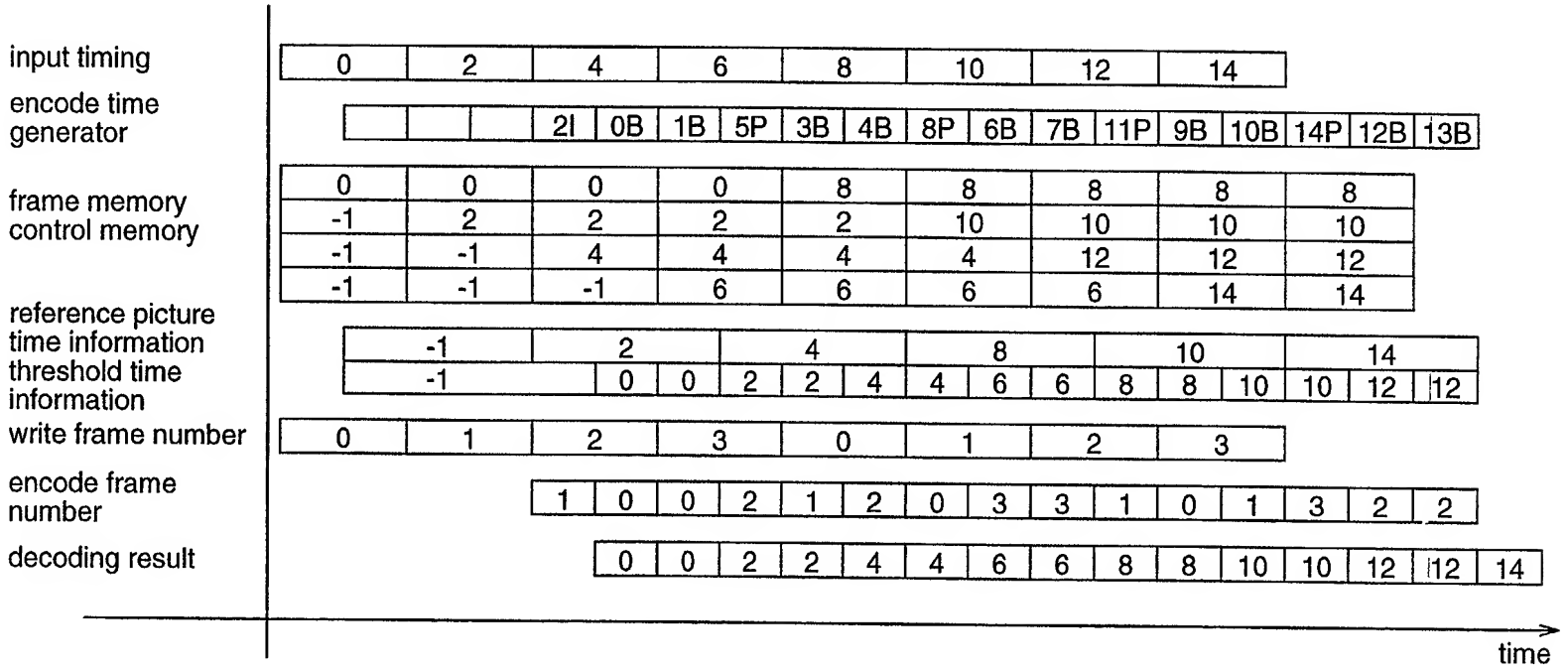

112
115
111
110
113
114
118
901
201 frame memory control memory
220
input time information
221
input time information
222
input time information
223
input time information
210
threshold time information
211
reference picture time information
control unit
203
1001
picture type information
encode time information
encode time generator
230
900
encode frame rate

Fig.11


input timing
0 2 4 6 8 10 12 14
encode time generator
2I 0B 1B 5P 3B 4B 8P 6B 7B 11P 9B 10B 14P 12B 13B
frame memory control memory
0 0 0 0 8 8 8 8 8
-1 2 2 2 2 10 10 10 10
-1 -1 4 4 4 4 12 12 12
-1 -1 -1 6 6 6 6 14 14
reference picture time information
threshold time information
-1 2 4 8 10 14
-1 0 0 2 2 4 4 6 6 8 8 10 10 12 12
write frame number
0 1 2 3 0 1 2 3
encode frame number
1 0 0 2 1 2 0 3 3 1 0 1 3 2 2
decoding result
0 0 2 2 4 4 6 6 8 8 10 10 12 12 14
time